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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,967	02/07/2001	Francine J. Prokoski	MIKOS-101	1836

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EXAMINER

NALVEN, ANDREW L

ART UNIT	PAPER NUMBER
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2134

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

7

Office Action Summary

Application No.

09/778,967

Applicant(s)

PROKOSKI, FRANCINE J.

Examiner

Andrew L. Nalven

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☒ Claim(s) 2-9, 12-14, 18-20, 25-27, 32-33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-34 are pending.

Drawings

2. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Objections

3. Claim 6 is objected to because of the following informalities: The cited claim contain the limitation "FlashCorrelation<<." Examiner has interpreted this to be a typo and for the remainder of the present office action has viewed the limitation as being "flash correlation." Appropriate correction is required.
4. Claims 25-27 and 32-33 are objected to because of the following informalities: The cited claim contain the limitation "flashcorrelation." Examiner has interpreted this to be a typo and for the remainder of the present office action has viewed the limitation as being "flash correlation." Appropriate correction is required.
5. Claim 20 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper

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dependent form, or rewrite the claim(s) in independent form. The cited claim fails to further limit its parent claim because claim 20 is of broader scope than its parent claim (claim 1).

6. Claims 3-9, 12-14, and 18-20 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claims should refer to other claims in the alternative only. See MPEP § 608.01(n). For the remainder of this office action the cited claims have been treated as if dependent from claim 1.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 14 recites the limitation "the EIS" in line 2. There is insufficient antecedent basis for this limitation in the claim.

9. Claims 6, 11, 25, 27, 32 and 34 contain the trademark/trade name Flash Correlation. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A

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trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a comparison method and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 4-5, 8-9, 12-14, 18-21, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al US Patent No. 5,799,082 in view of Barton US Patent No. 5,646,977.

11. With regards to claims 1, 4 (as dependent from claim 1) and 20-24, Murphy teaches an image acquisition device for producing an original array of two-dimensional digital information (Murphy, column 14 lines 14-27), means for obtaining current date and time information from satellite or radio broadcasts (Murphy, column 10 lines 1-9), means for obtaining current location information from satellite or radio broadcasts (Murphy, column 10 lines 1-9), an encoder for converting date/time, location, into a two-

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dimensional format called the encoded data array (Murphy, column 13 lines 30-37, position information), an embedder for combining the Encoded Data Array and the Original Array into a new Composite Array (Murphy, column 11 lines 36-39, embedding position information into image), an encrypter for transforming the Composite Array into another two-dimensional array called the Encrypted Composite Array (Murphy, column 13 lines 31-37), a transmission process to transfer the Encrypted Composite Array to the intended recipient (Murphy, column 15 lines 19-30), a decrypter to restore the Composite Array (Murphy, column 15 lines 31-37), and an encoding extractor for removing the encoded data array from the decrypted composite array (Murphy, column 15 lines 31-47, determining the pattern P of pixels). Murphy fails to teach the identifying of a sensor ID, restoring the original array, and determining changes between the restored array and original array. Barton teaches means for identifying a Sensor ID for the image acquisition device (Barton, column 7 lines 51-60, "creator of the block", column 8 lines 64-66), means for restoring the Original Array at pixel locations used for the encoding (Barton, column 8 lines 1-7, "returns data block to original form"), and means for determining changes between the restored array and the original array (Barton, column 8 lines 8-9, "Error Correction Code"). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Barton's methods of using a Sensor ID and restoring and determining changes with Murphy's system for secure authentication of images because it offers the advantage of ensuring that a creator or source of an object is known and verifiable (Barton, column 1

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lines 56-60) and ensuring that any errors made dare corrected (Barton, column 8 lines 8-9).

12. With regards to claim 5 (as dependent from claim 1), Murphy as modified teaches the use of the GPS system (Murphy, column 10 lines 1-5).

13. With regards to claim 8 (as dependent from claim 1), Murphy as modified teaches the Sensor ID including the serial number and odometer setting of the image acquisition device (Barton, column 6 lines 51-60, "creator of block" and "block sequence number").

14. With regards to claim 9 (as dependent from claim 1), Murphy as modified teaches the change detector evaluating subsections of the restored original array and the original array to localize areas of difference (Barton, column 8 lines 8-9).

15. With regards to claims 12 (as dependent from claim 1) and 28-31, Murphy as modified teaches everything described above and further teaches the date/time/location, and source being annotated onto the Encrypted Composite Array (Barton, column 7 lines 51-60, Murphy, column 13 lines 30-37, column 11 lines 36-39).

16. With regards to claim 13 (as dependent from claim 1), Murphy as modified teaches the encoded data providing the key to encryption and decryption algorithms (Murphy, column 13 lines 38-42, Barton, column 7 lines 21-24).

17. With regards to claim 14 (as dependent from claim 1 and as best understood), Murphy as modified teaches the operation of the EIS being triggered by the change of status of another device (Murphy, column 15 lines 20-47, downloading).

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18. With regards to claim 18 (as dependent from claim 1), Murphy as modified teaches the encoding being performed by overlaying a pattern of pixels of a particular color or grey scale value (Murphy, column 11 lines 36-58, authentication pattern).

19. With regards to claim 19 (as dependent from claim 1), Murphy teaches encoding being performed using steganography (Murphy, column 11 lines 22-35, position information into areas unlikely to interfere with visual perception).

20. Claims 6, 10-11, 25-27, and 32-34 rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al US Patent No. 5,799,082 and Barton US Patent No. 5,646,977 as applied to claims 1, 21, and 28 above, and further in view of Prokoski US Patent No. 5,583,950.

21. With regards to claims 6 and 10-11(as dependent from claim 1), 25, and 32, Murphy as modified fails to teach the decoder using flash correlation to select pixel locations of the encoded data array to test for authenticity. Prokoski teaches using flash correlation to select pixel locations of the encoded data array to test for authenticity (Prokoski, column 11 lines 4-19). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Prokoski's method of flash correlation with Murphy as modified because it offers the advantage of providing a robust method to compare of images that accommodates changes in size, warping of the picture, segmentation, visual noise, and local changes (Prokoski, column 1 lines 16-26).

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22. With regards to claims 26-27 and 33-34, Murphy as modified teaches the digital image being a sequence of digital images, there being a unique set of authenticating information for each digital image in the sequence and a corresponding unique data array, there being a unique composite array corresponding to each digital image in the sequence of composite arrays, the target composite array is a sequence of target composite arrays, and wherein flash correlation determines whether the sequence of target composite arrays is an authentic copy of the sequence of composite arrays (Murphy, column 14 line 38 – column 15 line 5, Prokoski, column 11 lines 4-19).

23. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al US Patent No. 5,799,082 and Barton US Patent No. 5,646,977 as applied to claim 1 above, and further in view of Steinberg et al US Patent No. 5,862,217.

24. With regards to claim 3 (as dependent from claim 1), Murphy as modified fails to teach the encryption and decryption step being repeated more than one time. Steinberg teaches the encryption and decryption step being repeated more than one time (Steinberg, column 5 lines 5-20). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Steinberg's method of repeated encryption with Murphy as modified because it offers the advantage of securing images as part of the image acquisition process thus ensuring that an image is never stored in an unencrypted format (Steinberg, column 2 lines 19-23).

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25. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al US Patent No. 5,799,082 and Barton US Patent No. 5,646,977 as applied to claim 1 above, and further in view of Rhoads US Patent No. 5,841,886.

26. With regards to claim 7 (as dependent from claim 1), Murphy as modified fails to teach the Sensor ID including a biometric identifier of the user of the camera. Rhoads teaches teach the Sensor ID including a biometric identifier of the user of the camera (Rhoads, column 7 line 65 column 8 line 5). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Rhoads' method of embedding biometric data in images with Murphy as modified because it offers the advantage of providing the ability to compare biometric information in high security authentication procedures (Rhoads, column 8 lines 1-5).

27. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al US Patent No. 5,799,082 and Barton US Patent No. 5,646,977 as applied to claim 1 above, and further in view of Goldberg US Patent No. 6,526,158.

28. With regards to claims 15-17 (as dependent from claim 1), Murphy as modified fails to teach the triggering device being a face recognition system, speed sensor, or alarm condition sensor. Goldberg teaches the triggering device being a face recognition system, speed sensor, or alarm condition sensor (Goldberg, column 12 line 63 – column 13 line 5, column 23 lines 39-62). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Goldberg's triggering mechanisms with Murphy as modified because it offers the advantage of ensuring that

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the desired camera target is in the field of view for image acquisition (Goldberg, column 12 line 63 – column 13 line 5).

Allowable Subject Matter

29. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

30. The following is a statement of reasons for the indication of allowable subject matter: The cited prior art fails to specifically teach an original array size being increased by a factor and subpixels being used for the steps of embedding, encrypting, decrypting, and restoring and thus fails to anticipate or render the claim obvious.

Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

32. Schipper et al US Patent No. 5,764,770 teaches a system for image authentication patterning.

33. Schumacher et al US Patent No. 6,269,446 teaches a system for authenticating images from digital cameras.

34. Koto et al US Patent No. 6,671,376 teaches a video scramble/descramble apparatus.


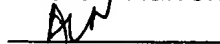
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35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L Nalven whose telephone number is 703 305 8407. The examiner can normally be reached on Monday - Thursday 8-6, Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on 703 308 4789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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